DEERE & COMPANY

JOHN DEERE ROAD, MOLINE, ILLINOIS 61265 U.S.A.

Safety & Environment

24 June 1982

Region V
U.S. Environmental Protection Agency
111 West Jackson Boulevard
Chicago, Illinois 60604

Attention: Mr. John Oakes

Gentlemen:

CERCLA Notification
John Deere Foundry - East Moline, IL
Follow-up and Request to Cancel Notification

On 7 October 1981, we filed a formal notification of a suspected hazardous waste site on the property of John Deere Foundry in East Moline, Illinois. This followed a verbal report to your Mr. Chester Marcyn on 2 July 1981. This site consists of two small lagoons receiving wastewaters from adjacent property previously owned by the Rock Island Railroad, and currently owned by Chrome Crankshaft. Negotiations had been underway for many years to require the owners of the adjacent property to cease their discharge, which was purported to consist of storm water runoff and oily waste. The discovery that the waste in fact contained heavy metals and was potentially a hazardous waste precipitated our report to your agency.

In November 1981, we unilaterally closed off the discharge pipes onto our property and eliminated this source of hazardous waste. We then began a study to determine the extent of contamination on our property and the proper cleanup steps to be taken.

During March 1982, a study of these ponds was undertaken by Beling Consultants, Inc. to determine both quantity and quality of wastes present. Results of this study are summarized in a report entitled, "Analysis of Two Oil Ponds for John Deere Foundry, East Moline, Illinois", prepared by Beling Consultants and dated April 1982 (copy attached).

This study clearly indicates that neither the floating oil, the water, nor the bottom sludge is a hazardous waste as defined under RCRA regulations. It does demonstrate that free oil, total suspended solids, and some heavy metals are present in the liquid phase in sufficient quantities to prohibit direct discharge of this liquid to waters of the State of Illinois.

It is the intention of John Deere Foundry to develop an environmentally sound plan acceptable to the Illinois Environmental Protection Agency for treatment and ultimate disposal of these wastes, and to fill in the ponds with inert fill material. We will notify you of the exact nature of our approved plan and associated completion dates.

We do not, however, believe that the evidence supports listing this site under provisions of CERCLA. Our initial reporting to your agency was based on preliminary information and uncertainty in interpreting a new law for which specific regulations have yet to be promulgated. We now believe that our report under CERCLA was superfluous and request that our notification be withdrawn.

Your cooperation in officially closing this matter will be greatly appreciated. Should you have any questions, please contact me at: 309/752-5152.

Yours truly,

John E. Smith
Environmental Control

/jv
Att.

c: R. D. Grotelueschen/D. Beck, Deere & Co.
M. E. McGuire, J. D. Foundry
R. B. Pringle, Deere & Co.
D. R. Williams, J. D. Foundry

ANALYSIS OF TWO OIL PONDS

for

JOHN DEERE FOUNDRY
East Moline, Illinois

April 1982

BELING CONSULTANTS, INC.
1001 - 16th Street
Moline, Illinois

20141-B-10,389-26

I. SCOPE:

On February 8, 1982, Beling Consultants, Inc. was authorized to perform an analysis of two oil ponds on the eastern portion of the John Deere Foundry property and to present the results in a written report. The Analysis included sampling of the oil ponds to determine certain chemical characteristics of the oil, water and sludge, and to estimate the quantity of oil, water and sludge in each pond. In addition, determination of the groundwater elevation in the vicinity of the oil ponds was required.

The analysis methodology included the following:

1. Development of a grid system for each pond to determine sampling locations and the depths of oil, water and sludge.

2. Drilling groundwater wells around each pond and measuring elevations of groundwater.

3. Collecting samples of oil, water and sludge and analyzing for specific constituents.

4. Determining depth of pond and height of oil, water and sludge in each pond, and calculating the respective volumes of each.

II. SAMPLING PROGRAM:

For feed control and identification, a grid system was established for each pond. The relative location of each pond is shown in Figure 1. The grid system for each pond is shown in Figure 2 and Figure 3, Pond No.1 (west pond) and Pond No.2 (east pond), respectively.

The perimeter of each pond was established on site by field surveys.

At each grid point within the ponds, a bottom-of-the-pond depth and a top-of-sludge depth was determined. From these depths, cross sections were plotted (see Appendix) and used in determining the volumes of sludge and water in each pond.

The volume of oil was determined by measuring the oil thickness and estimating (through field measurements) the portion of each pond that was covered by oil. Determining the portion of pond which was covered by oil was complicated because it changed constantly, depending on the wind velocity and direction.

The sampling apparatus used to obtain sludge samples consisted of a 1-inch inside diameter acrylic pipe. The pipe was graduated in 0.1 foot increments. A ball valve was attached to the bottom of the pipe. The sampling procedure consisted of placing the pipe in the pond with the valve open. When the pipe hit the bottom of the pond the valve was closed, and a sample obtained. This procedure, consistent with our grid pattern, provided us with cross sections of the pond.

For Pond No.1 (west pond), water samples were taken at points 1, 4 and 5 , and sludge samples were taken at points 1 through 8. The sample taken from point 3 was taken 10 feet north of that shown on Figure 2. The oil sample was taken from point 7. The oil was black in color with a lighter brown layer underneath.

For Pond No.2 (east pond), water samples were taken at points 8, 9 and 10, and sludge samples were taken at points 1 through 11. The samples taken from points 1 and 2 were taken 3 feet west and 11 feet west of the grid intersections shown on Figure 3. The oil sample was taken from point 11. The oil was reddish orange in color with a lighter brown layer underneath.

The results of the laboratory analysis of the composite samples for each pond are shown on the following pages.

The calculations (see Appendix for details of calculations) for determining the pond produced the following estimates:

	Quantity in Cubic Feet	
Item	Pond No.1 (west)	Pond No.2 (east)
Oil	12	26
Water	7,514	10,669
Sludge	14,841	14,763

Beling Laboratories
1001 - 16th Street
Moline, Illinois 61265
Phone 309 / 757-9800

Laboratory Report

Date April 21, 1982

Received March 23, 1982

Lab No. B0399 & B0401

West Pond (1)

John Deere Foundry
Hwy 84 & 14th Avenue
East Moline, IL 61244

OIL

PCB Content	< 5 µg/g
Chromium	145 µg/g
Lead	28 µg/g

WATER

	Cadmium	0.007 mg/l
	Total Chromium	0.37 mg/l
	Hexavalent Chromium	0.006 mg/l
*	Copper	0.25 mg/l
* *	Lead	0.2 mg/l
	pH	7.35
* *	Oil & Grease	24 mg/l
	Total Carbon	69.9 mg/l
	Inorganic Carbon	11.1 mg/l
	Total Organic Carbon	58.8 mg/l
* *	Total Suspended Solids	369 mg/l
	Nickel	0.05 mg/l
	Zinc	0.316 mg/l

* EXCEEDS STREAM [illegible]
* * EXCEEDS [illegible]

Paul R. Jany

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Phone 309 / 757-9800

Laboratory Report

Date April 21, 1982

Received March 23, 1982

Lab No. B0403

West Pond (1)

John Deere Foundry
Hwy. 84 & 14th Avenue
East Moline, IL 61244

SLUDGE

Total Solids	18.8%
Oil Content	8.0%
Ash Content	10.8%
PCB Content	< 5 µg/g
BTU Content	2026 BTU/lb.

	TOTAL, AS RECEIVED	E.P TOXICITY PER RCRA
Cadmium	5 µg/g	0.068 mg/l
Chromium	580 µg/g	0.35 mg/l
Copper	112 µg/g	0.05 mg/l
Lead	176 µg/g	0.2 mg/l
Nickel	6 µg/g	0.16 mg/l
Zinc	192 µg/g	6.65 mg/l

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Laboratory Report

Date April 21, 1982

Received March 23, 1982

Lab No. B0398 & B0400

East Pond (2)

John Deere Foundry
Hwy. 82 & 14th Avenue
East Moline, IL 61244

OIL

PCB Content	< 5 µg/g
Chromium	18 µg/g
Lead	5 µg/g

WATER

Cadmium	<0.005 mg/l
Total Chromium	< 0.05 mg/l
Hexavalent Chromium	<0.005 mg/l
Copper	0.11 mg/l
Lead	<0.1 mg/l
pH	7.04
Oil & Grease	31 mg/l
Total Carbon	86.3 mg/l
Inorganic Carbon	27.7 mg/l
Total Organic Carbon	58.6 mg/l
Total Suspended Solids	23 mg/l
Nickel	0.05 mg/l
Zinc	0.113 mg/l

Paul A. Jones

Beling Laboratories
1001 - 16th Street
Moline, Illinois 61265
Phone 309 / 757-9800

Laboratory Report

Date April 21, 1982

Received March 23, 1982

Lab No. B0402

East Pond (2)

John Deere Foundry
Hwy. 84 & 14th Avenue
East Moline, IL 61244

SLUDGE

Total Solids	27.6%
Oil Content	7.1%
Ash Content	20.1%
PCB Content	< 5 µg/g
BTU Content	1965 BTU/lb.

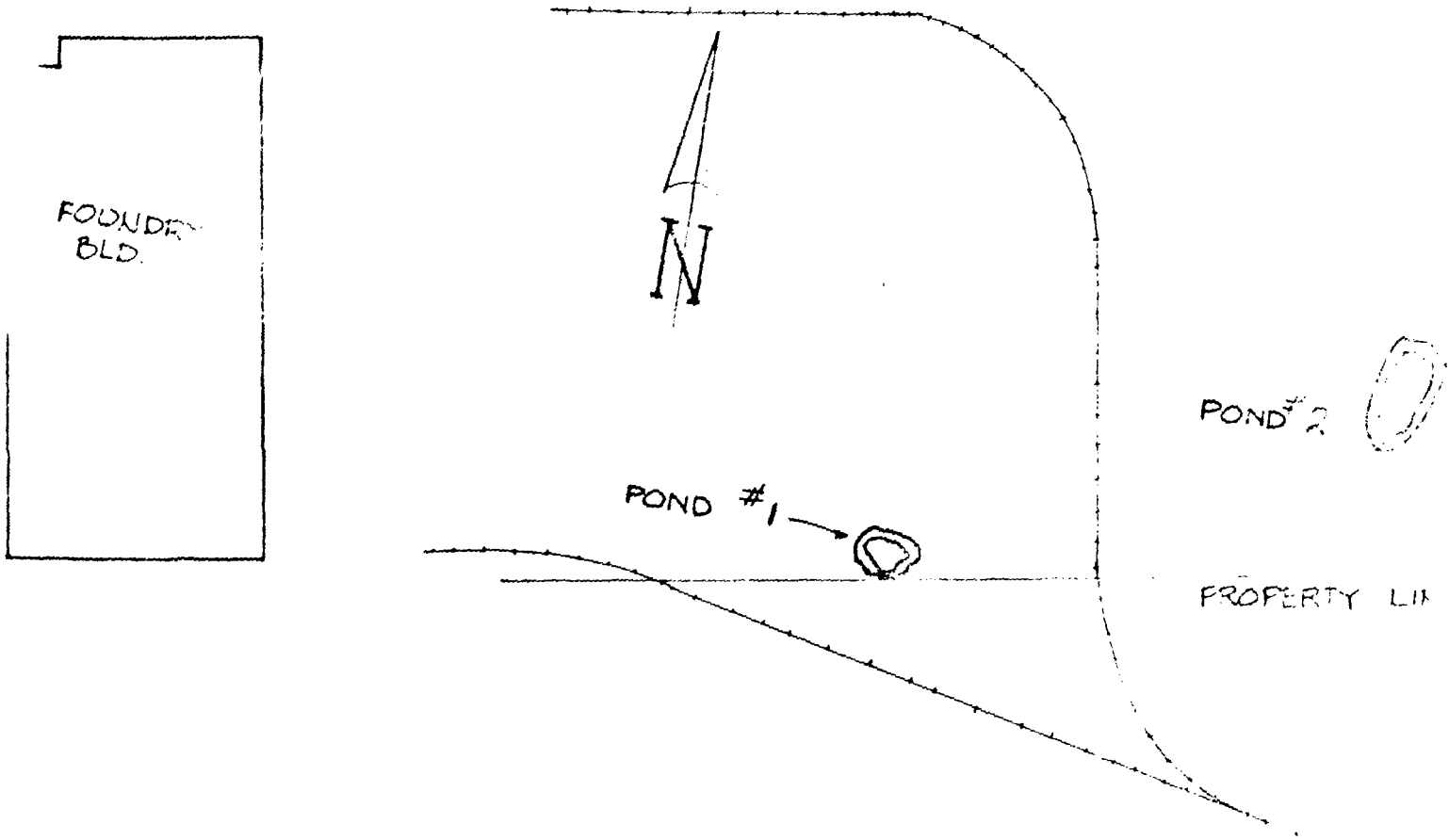
	TOTAL, AS RECEIVED	E.P. TOXICITY PER RCRA
Cadmium	2 µg/g	0.030 mg/l
Chromium	619 µg/g	0.19 mg/l
Copper	117 µg/g	0.04 mg/l
Lead	123 µg/g	<0.1 mg/l
Nickel	10 µg/g	0.19 mg/l
Zinc	153 µg/g	3.20 mg/l

Paul A. Jones

III. GROUND WATER LEVELS:

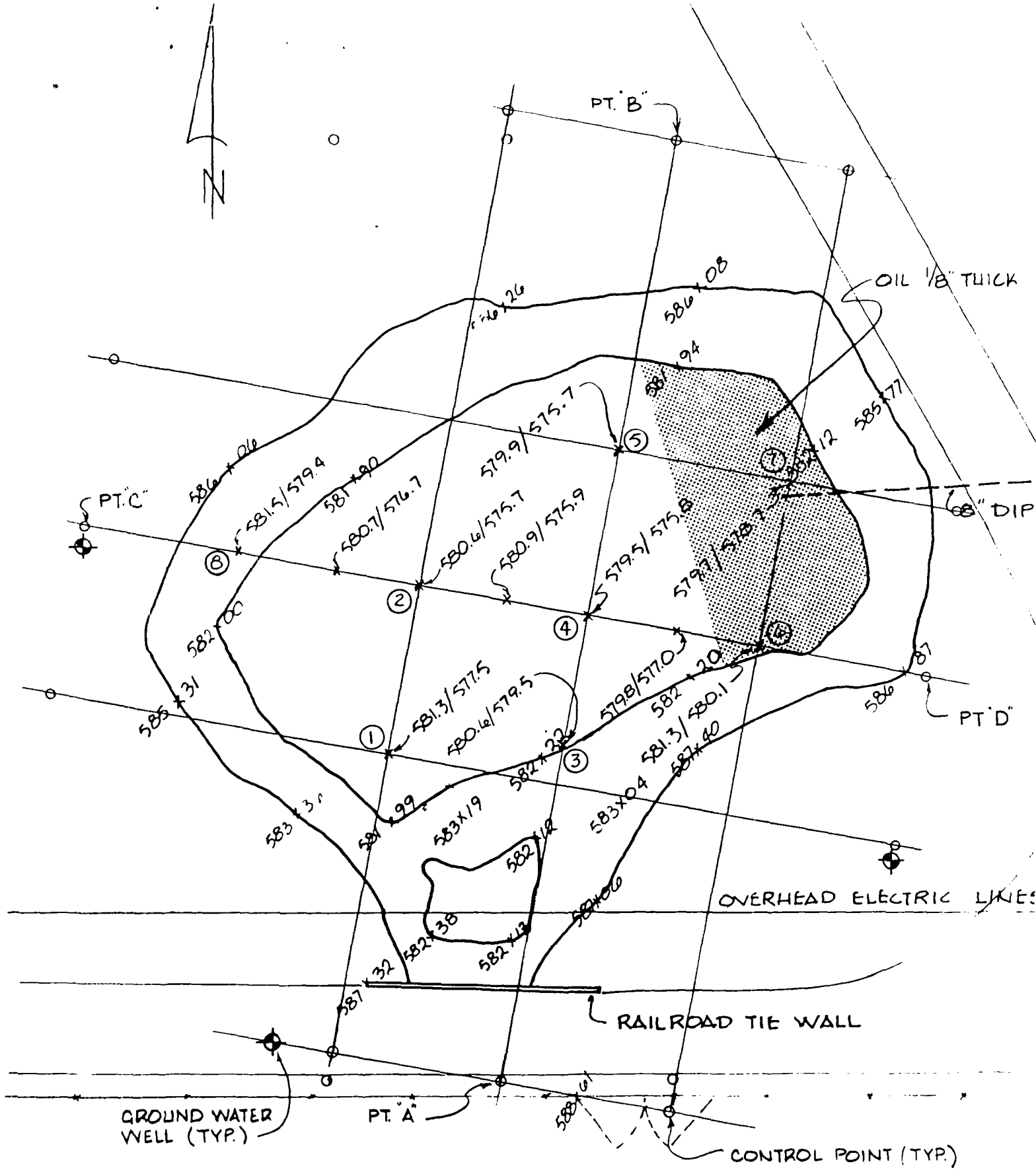
Holes were drilled with a gasoline driven auger around three sides of each pond. Generally, these were located on the east, south and west side of each pond. Locations of each ground water well is shown on Figures 2 and 3. The height of the ground water was measured on April 23, 1982, one day after the holes were drilled. The results of the measurements are indicated below.

	Pond No.1 (W)	Pond No.2 (E)
Water level in pond	582.10	580.90
Groundwater well - east	581.69	582.28
Groundwater well - south	581.81	580.23
Groundwater well - west	580.90	581.51



LOCATION MAP
NO SCALE

SILVIS



POND # 1

SCALE 1" = 15

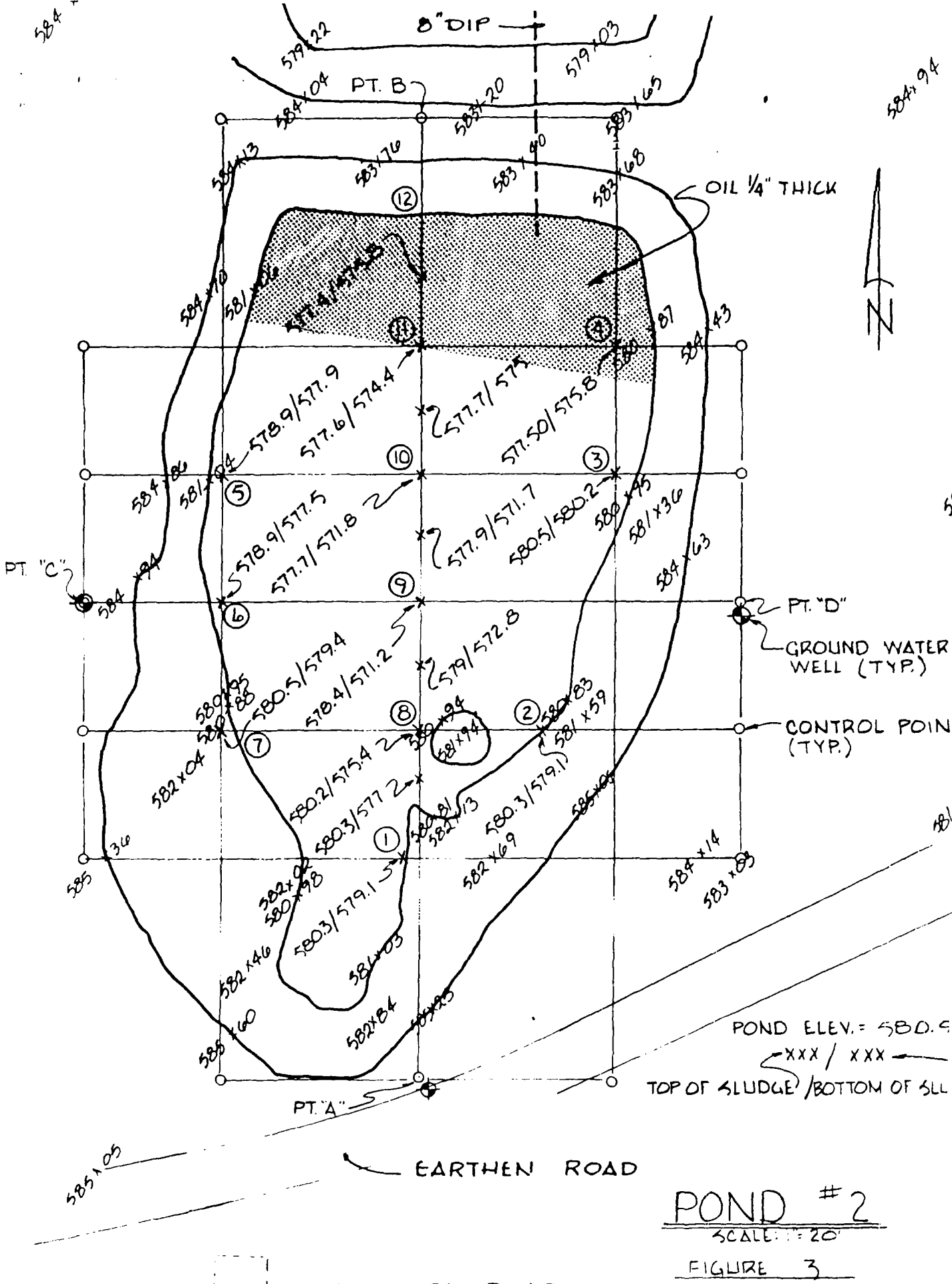
FIGURE 2

POND ELEV: 582.1

XXX/ XXX

TOP OF SLUDGE/ BOTTOM OF SLUDGE

BURIED RAILROAD TANK CAR



POND #2

SCALE: 1" = 20'

FIGURE 3